



Tallgrass Prairie CENTER *Restoring a National Treasure*



Mission: The Tallgrass Prairie Center develops research, techniques, education and source identified seed for restoration and preservation of prairie vegetation in rights-of-way and other lands.

Fall 2008

The Tallgrass Prairie Center and UNI To Host 22nd NAPC In 2010

North American Prairie Conference: A Sense of History

By Daryl Smith

On September 14 and 15, 1968, Knox College at Galesburg, Illinois hosted a symposium on prairie and prairie restoration in response to a groundswell of interest in tallgrass prairie by people from many different areas of environmental concern. Peter Schramm, prairie ecologist, directed the symposium attended by 120 enthusiastic prairie devotees. Attendees included botanists, plant ecologists, zoologists, soil scientists, naturalists, conservationists, landscape architects, historians, and interested lay people. A number of excellent papers were presented and subsequently published in the proceedings. Several topics engendered lively debate and the session on prairie restoration provided useful information for novices engaged in this endeavor. The two-day meeting concluded with a field trip to the Knox College Biological Field Station and a suggestion that such a symposium be convened biennially.

Over the next 8 years, the University of Wisconsin-Madison, Kansas State University, the University of North Dakota, and Iowa State University hosted the event. In the process, it rapidly morphed into a four-day gathering known as the Midwest Prairie Conference. Interest continued to grow with attendees coming from as far away as Texas and Canada. In recognition of the breadth of participation, the 6th conference at Ohio State University was renamed the North American Prairie Conference. The biennial North American Prairie Conference has continued with Missouri, Michigan, Nebraska, Ontario, Minnesota, and Texas joining Illinois, Ohio, Wisconsin, North Dakota, Kansas, and Iowa as host states or province.

The University of Northern Iowa hosted the 12th conference. Among the 525 participants, poets, land managers, farmers, teachers, roadside managers, geographers, historians, artists and a growing number of prairie enthusiasts joined the occupations represented at the first conference. The Iowa Prairie Network came out of that gathering. The theme of the conference, "Recapturing a Vanishing Heritage," was inspired by a quote of Aldo Leopold in the Sand County Almanac, "What a thousand acres of Silphiums looked like when they tickled the bellies of the buffalo is a question never again



to be answered, and perhaps not even asked." We have lost so much of the tallgrass prairie that it is difficult to visualize what it once was and as a society we often appear not to be concerned about this loss. The North American Prairie Conferences provide opportunities to attempt to answer Leopold's question and to gather momentum to ask the question.

Winona State University hosted the 21st conference this past August. This excellent conference centered on the theme, "The Prairie Meets the River," and once again provided an opportunity to renew old acquaintances and meet new people from all walks of life who are interested in tallgrass prairie.

The Tallgrass Prairie Center at the University of Northern Iowa will host the 22nd North American Prairie Conference in August 2010. Focusing on the theme that prompted the first conference, "Restoring a National Treasure", the staff at the Tallgrass Prairie Center view this conference as a fine opportunity to demonstrate the enthusiasm of Iowans for tallgrass prairie, to showcase accomplishments with tallgrass prairie restoration, and to appreciate and celebrate our biological and cultural prairie heritage.

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A Roaders Convention

That's what you call it when 100 people who believe their counties' 4,000 acres of roadside ditches are worth planting to prairie all gather in one place at one time. Day-1 of the 22nd Annual Roaders Convention was staged in Sac City and put the spotlight on roadside management equipment. The show featured equipment for everything from the less glamorous side of roadside vegetation management- spraying weeds and cutting brush, to the latest native seed drills and hydro-seeders developed for establishing prairie grass and wildflowers. Two recent developments from the world of tractors were on hand as well.

For Day-2 the event moved 25 miles south to Carroll, Iowa (for lack of hotel rooms in Sac County) for more scholarly presentations at the beautiful Carrollton Inn. Highlighting the program were Connie Mutel speaking on her latest writing contribution- "The Emerald Horizon: The History of Nature in Iowa" and Dr. Cindy Cambardella of the USDA Soil Tilth Lab, discussing her research on prairie and agricultural soils. Nancy Anania of Iowa Department of Transportation's Office of Systems Planning and Joe McGovern representing the Iowa Natural Heritage Foundation also delivered strong presentations.

With support from Iowa DOT's Living Roadway Trust Fund, the annual roadside conference continues to be quite a bargain. For their \$100.00 registration fee, guests received four delicious meals, a hefty packet of materials and a free copy of Connie Mutel's book (not to mention free take home gifts of Cookies Barbecue Sauce and popcorn as local Sac County products). Next year's gathering of Roaders will be in Mason City, Iowa hosted by Cerro Gordo County IRVM.

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Chautauqua Auditorium, Sac City, IA

Tallgrass Prairie Center Distributes Film To Iowa Classrooms

The Tallgrass Prairie Center has provided 1000 free DVD copies of *America's Lost Landscape: The Tallgrass Prairie* to classrooms across Iowa. The film and associated curricular materials were distributed directly to individual teachers via the science curriculum consultants of Iowa's Area Education Agencies.

America's Lost Landscape: The Tallgrass Prairie tells the rich and complex story of one of the most astonishing alterations of nature in human history. Prior to Euro-American settlement in the 1820s, one of the major landscape features of North America was 240 million acres of tallgrass prairie. But between 1830 and 1900 – in the space of a single lifetime – the tallgrass prairie was steadily transformed to farmland.

The recipient of 25 major film festival awards including the prestigious Cine Golden Eagle and the International Documentary Association's Pare Lorentz Award, the film has been broadcast nationally three times by PBS and continues to air on public television stations across the country.

America's Lost Landscape was produced by New Light Media in association with the Tallgrass Prairie Center. Dr. Daryl Smith served as executive producer and co-producer. Dr. Smith also served as the co-project director of the curricular materials development effort working in tandem with UNI Professor Dr. Cherin Lee.

Classroom distribution of the film and curricular materials was made possible by a generous grant from Iowa's Living Roadway Trust Fund.

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Restoration Guide Brochures Available

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Tallgrass Prairie CENTER

NEWSLETTER

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Adding Wildflowers To Prairie Grass Plantings: Ten Years Later

In fall 1998, 23 wildflower species were broadcast seeded into a 25-year old prairie grass planting at the University of Northern Iowa in Cedar Falls, Iowa. To determine the effect on wildflower establishment, mowing treatments were applied in the summer of 1999 and 2000. In this experiment, we found that mowing in the first year after seeding increased the number of wildflower seedlings (abundance) and also improved their chances for survival over the first winter (Williams et al. 2007). However, the number of wildflower species (richness) was similar whether mowing was used or not. By the end of the experiment, we found 22 of the 23 species.

Fast forward to 2008. Ten years had elapsed since we seeded those wildflowers into that stand of highly competitive prairie grasses. Did the wildflowers increase, decrease, remain the same, or disappear after 10 years? To answer this question, we re-sampled the same plots that were sampled in 1999 and 2000. Our objective was to assess the effect of ten years time on wildflower abundance and diversity. Here is what we found:

- Twenty-two of the 23 wildflower species detected in 2000 were present in 2008.
- Eleven species not detected in mowed plots in 2000 were found in 2008 (Table 1).
- Five species detected in 'no-mow' plots in 2000 were not found in 2008 (Table 1).
- Twenty species increased in abundance from 2000 to 2008 in mowed plots whereas only 8 species increased in 'no-mow' plots (Table 1).

The bottom line is that seeding wildflowers into a highly competitive stand of prairie grasses can be successful if you frequently mow in the first growing season after seeding. Mowing will maximize wildflower establishment and ensure their persistence over time-for at least for 10 years!

Williams D, Jackson L, Smith D. 2007. Effects of frequent mowing on survival and persistence of forbs seeded into a species-poor grassland. *Restoration Ecology* 15:124-33 p.



Mowed plot June 26, 2008



No-Mow plot June 26, 2008

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Table 1. Mean shoots by mowing treatment sampled in 2000 and 2008.

Species	Mow			No-Mow		
	2000	2008	gain(+),loss(-)	2000	2008	gain(+),loss(-)
Black-eyed susan	10.0	8.8	-	12.7	0.8	-
Butterfly milkweed	0.0	0.4	+	0.3	0.0	-
Canada anemone	0.0	0.0	no change	0.0	0.0	no change
Compass plant	0.0	0.3	+	0.2	0.5	+
Flowering spurge	0.2	0.0	-	0.2	0.0	-
Golden alexanders	0.0	1.1	+	0.3	7.3	+
Gray-headed coneflower	4.0	120.3	+	4.4	4.1	-
Leadplant	0.0	0.8	+	0.0	0.0	no change
New England aster	1.7	4.1	+	1.1	0.3	-
Ohio spiderwort	0.0	0.4	+	0.0	0.7	-
Ox-eye sunflower	1.0	5.1	+	0.8	0.0	-
Pale purple coneflower	0.3	3.3	+	0.3	2.5	+
Prairie blazingstar	0.0	0.3	+	0.0	0.0	no change
Prairie coreopsis	0.0	4.7	+	0.0	9.6	+
Purple prairie clover	0.0	1.5	+	0.0	0.0	no change
Rattlesnake master	0.0	9.6	+	0.0	3.6	+
Rough blazingstar	0.0	0.3	+	0.0	0.0	no change
Round headed bush clover	0.2	0.3	+	0.1	0.0	-
Showy tick trefoil	0.1	5.5	+	0.0	0.0	no change
Stiff goldenrod	2.0	64.9	+	1.2	11.7	+
Sweet coneflower	0.0	1.3	+	0.0	0.0	no change
Thimbleweed	0.4	8.8	+	0.7	0.0	-
Wild bergamot	2.4	16.8	+	1.7	14.7	+

2nd Annual Fall Seminar Series

On September 10, the Tallgrass Prairie Center kicked off its second fall Natural Resource Research and Management Seminar Series. Dr. Steve John, the executive director of the Agricultural Watershed Institute, located in Decatur Illinois spoke on supporting your local grass farmer and the how to's of setting up a local bioenergy movement. The seminar was attended by about 20 people including graduate students, UNI staff and faculty, and interested people in the general public. All seminars are held at the Tallgrass Prairie Center on Wednesdays at 4 PM

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- **Oct. 8:** Justin V. Huisman, The Effects of Planting Methods on Seedling Emergence and Establishment in a Tallgrass Prairie Reconstruction.
- **Oct. 22:** Tom Rosburg, Inventory, Mapping, and Quality Assessment of Prairie Vegetation in the Grand River Grasslands.
- **Nov. 5:** Karl Delong, Responses of Species to Intense Restoration of an Oak-Hickory Woodlot to a Closed Savanna.

Native Seed Harvest and Cleaning Workshop

When: Thursday, October 30, 2008

Where: Tallgrass Prairie Center, University of Northern Iowa
(2412 W 27th St., ¼ mile West of the UNI Dome and McLeod Center)

Time: 9:00 AM-2:00 PM

Cost: \$50.00 per participant, includes: Registration and catered lunch, Native Seed Production Manual, and reference materials.

Featuring:

- Hands-on low-tech harvest and cleaning techniques
- Mechanical harvest and cleaning demonstrations
- Equipment demonstrations
- 'Name That Seed' Quiz with prizes!

Learn:

- When and How to Harvest Which Species
- How to determine seed ripe/fill
- Cleaning and conditioning to improve seed quality
- Tips on seed storage

To Reserve One of 30 Slots: e-mail Ryan Welch (rwelch@uni.edu), Phone (319.273.3828), or Fax (319.268.0668) Registration Information ON or BEFORE October 24th, 2008!



Student Employees Restore A National Treasure

This fall the Tallgrass Prairie Center welcomes two new student employees as well as our returning student staff. Students are critical to the mission of the Tallgrass Prairie Center, from research to outreach, to native seed production. Students have a hands on experience with the Centers' efforts, adding their energy and creativity for projects.

Our returning students include, Brent Butler and Molly Schlumbohm. Brent, a Printmaking major (May 2009) with a graphic design background, has been the creative force of the publications the Center has produced for the past two years. "Having the opportunity to work with such passionate people in the conservation field, and helping them to achieve their vision graphically, is such a reward." Molly, an Earth Science major (2010) with an emphasis in Interpretive Naturalist, has assisted in seed production and with outreach programs. "Developing on-site presentations for preschoolers to adults, has helped me prepare for working with land owners as a naturalist."

The center's new students include Angie Lake, Rachel Bench and Jo Casey. Angie, a Biology major (May 2009), has had plenty of experience harvesting seed this fall. "I really enjoy the openness of the staff and the wide variety of jobs I can take on." Rachel, an Ecology major (Dec. 2009) with a Spanish minor has been busy collecting and cleaning the variety of seeds produced at the center. "I like how easy going everybody is, and the experience I can gain in a wildlife restoration/management career." Jo, a Graphics Communication major (May 2009) is an intern with the Roadside Program this academic year. "Working at the

Tallgrass Prairie Center has been a great opportunity for me to improve the skills I will need in my future career. Everyone who works here is incredibly helpful and friendly which creates a fun and productive atmosphere."

The Tallgrass Prairie Center wishes the best for all the students in the future and thanks them for all their efforts.



Students clockwise top: Brent Butler, Angie Lake, Jo Casey, Rachel Bench, Molly Schlumbohm